

WHAT IS CLAIMED IS:

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1. An AC servomotor using an annular polar anisotropic magnet in a rotor, wherein the annular polar anisotropic magnet is split into two or more annular polar anisotropic magnets in an axial line direction thereof, and magnetic poles of the corresponding split annular polar anisotropic magnets are disposed so as to be shifted by a predetermined angle  $\theta'$  which is greater than a skew angle  $\theta$  which is determined based on the number of torque ripples per rotation of the rotor determined by the number of magnetic poles of the annular polar anisotropic magnet at the rotor side and the number of slots in a stator-side iron core.

2. An AC servomotor according to Claim 1, wherein the skew angle  $\theta$  is equal to half the period of a cogging torque which is determined based on the number of torque ripples per rotation of the rotor determined by the number of magnetic poles of the annular polar anisotropic magnet and the number of slots in the stator-side iron core.

3. An AC servo motor according to Claim 1, wherein the predetermined angle  $\theta'$  is an angle obtained by adding to the skew angle  $\theta$  a value which takes into consideration magnetic interference between the split annular polar anisotropic

magnets.

4. An AC servomotor according to Claim 1, wherein the predetermined angle  $\theta'$  is approximately  $4/3$  times the skew angle  $\theta$  which corresponds to half the period of a cogging torque determined based on the number of torque ripples per rotation of the rotor determined by the number of magnetic poles of the annular polar anisotropic magnet and the number of slots in the stator-side iron core.

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